

# BRAMPTON ECO PARK STRATEGY



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2019



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The *Brampton 2040 Vision: Living the Mosaic* proposes a bold new vision for Brampton's future. Part of this vision is the proposal of a Brampton Eco Park, which looks to conserve and enhance natural systems within the City while striving to achieve the optimal balance between environmental conservation and use.

## **I.0 BRAMPTON'S VISION**

### **The Setting**

*A complete and healthy community is formed whereby the features which support the human inhabitants (roads, parks, schools, sidewalks) become the elements that provide protection, create habitat, prevent flooding, and adapt to climate change.*

Population growth and resultant land-use changes have led to the significant loss of natural systems within Brampton. Brampton's rapid urbanization and large amount of industrial and commercial lands have resulted in low tree coverage and declining natural areas. Currently, less than 20% of Brampton's land mass is defined as natural heritage system (NHMS, 2014), which provides vital ecosystem services to Brampton residents and critical habitat to local species. To compound these pressures is the accelerating effect of climate change and its impact on our natural and urban systems.

Brampton's natural features and areas provide vital ecosystem services to the community, including but not limited to water filtration, water attenuation, temperature mitigation, erosion control, and air filtration. These systems provide not only economic savings through the direct community services they deliver, but also increase urban resilience, protecting cities against intensifying weather events and changes in climate.

Natural spaces also provide health, social, cultural, recreational, economic, and aesthetic benefits to local residents. Regular access and close proximity to nature can improve mental and physical

## **DEFINITIONS**

**ECO SPACE:** Green and sustainable spaces within Brampton that allow people and the environment to live together, and strengthen the coexistence of people and the environment by:

- i) Enhancing and maintaining natural systems and processes,
- ii) Integrating opportunities for meaningful social and environmental interactions and experiences; and
- iii) Actively striving to incorporate the guiding principles of Eco Park.

**ECO PARK HUB:** Concentrations of green areas within Brampton identified as strategic areas for the expansion of Brampton Eco Park.

**BRAMPTON ECO PARK:** A large and growing municipal park and nature reserve existing across the city and interwoven within the city landscape. It consists of Eco Spaces, including but not limited to the city's natural heritage system, parks, green spaces, green infrastructure streetscapes, utility corridors, and yards that strive for the Eco Park principles. This is an ongoing process that will result in a city filled with connected Eco Spaces.

**ECO PARK PROGRAM:** The City's Eco Park Strategy and its implementation to create Brampton Eco Park.

**ECO PARK PRINCIPLES:** A set of seven principles that defines and guides the formation of Eco Spaces.

**ECOSYSTEM:** All organisms living in a particular area, and the complex relationships between them and with their environment.

**ECOSYSTEM SERVICES:** The direct and indirect benefits and contributions of ecosystems to human well-being, e.g. protection from flooding, water filtration, temperature mitigation, and health benefits.

health, increase resident wellbeing, attract economic investments, and strengthen community cohesion (European Commission, 2016). Significant population growth and intensification are predicted for Brampton's future, which also brings further pressure on Brampton's environmental, social, and infrastructure systems. Furthermore, changing climate and intensifying weather events threaten the long- and short-term welfare of Brampton's infrastructure, residents, businesses, and institutions.

To address these concerns, Brampton's 2040 Vision: Living the Mosaic looks to better conserve and enhance natural systems within the City while effectively utilizing the benefits they provide to Brampton's social and infrastructure systems. Brampton Eco Park is one of the catalytic actions to be undertaken to achieve this.

### The Vision of Brampton Eco Park

*By 2040 all Natural Heritage Systems, parks, and applicable urban spaces within Brampton will be transitioned into a connected network of Eco Spaces forming one grand Brampton Eco Park.*

Brampton Eco Park is a place that reflects Brampton's identity, provides unique social services, builds community cohesion, protects and supports City infrastructure while conserving, enhancing, and celebrating Brampton's natural landscapes.

Through a mosaic of sustainable natural and urban spaces, the Brampton Eco Park will be interwoven and embedded into the fabric of the city's urban systems and landscapes, providing harmonious benefits for both residents and nature alike. It will foster strong local stewardship, and encourage active and connected neighbourhoods, generating a strong sense of community.

The Eco Park Program aims to achieve this by 2040. Building on identified Eco Park Hubs, the city's current and future natural heritage system, parks, green spaces, green infrastructure streetscapes, utility corridors, yards and other suitable spaces will be established into Eco Spaces shaped by a set of identified Eco Park principles. These spaces will be expanded and amalgamated into a network forming one grand designated Brampton Eco Park.

### Eco Spaces

Eco Spaces are areas that strengthen the coexistence of people with their environment, foster local community stewardship, and promote active neighbourhoods. These spaces will conserve and enhance the natural environment, and ensure that ecological processes are maintained and a diversity of organisms are supported on site. While doing so, Eco Spaces will also provide integrative social resources and benefits to Brampton residents reflective of the identity and needs of the local community (Table 1). This will be done through a sustainable and nature-based solution lens grounded in a set of guiding Eco Park principles.

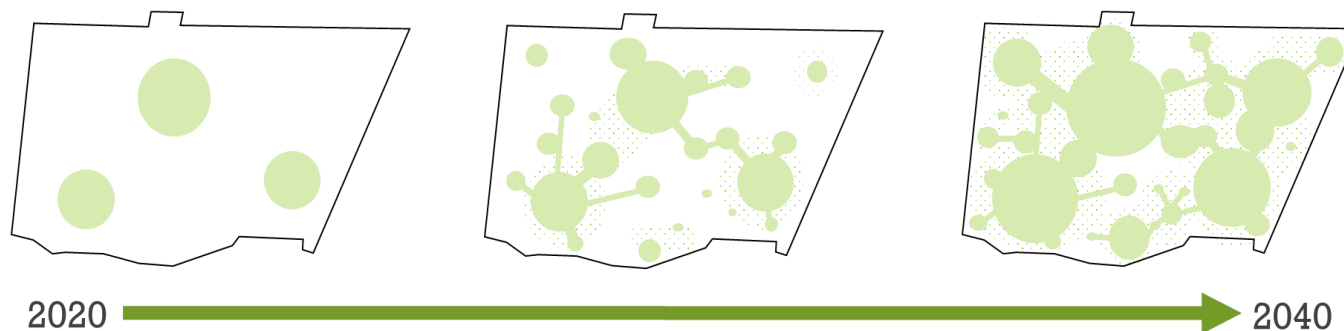


Figure 1: Conceptual image of Brampton Eco Park evolution

Ecological Benefits	Ecosystem Services	Social Services	Economic Benefits
Increases biodiversity	Water filtration	Passive recreation	Increases longevity of grey infrastructure
Provides habitat for plants and animals	Temperature mitigation	Community identify and cohesion	Mitigates flood damage costs
Improves connectivity	Air filtration	Educational opportunities	Supports infrastructure capacity, reducing requirements for system upgrades
Controls pests and disease	Water attenuation and flood protection	Community and cultural programs	Promotes technological innovation and green jobs
Promotes pollination	Erosion control	Promotes health and well-being	Attracts new businesses and talent by increasing city livability and attractiveness
Protects migration paths	Carbon sink	Improved active transportation systems	Decreases healthcare costs through improved physical and mental health
Strengthens genetic diversity within species	Groundwater recharge	Cultural and creative art displays	Generates energy savings
Reduces the spread of invasive species	Soil formation	Innovation opportunities	Attracts visitors

## Supporting Documents

In addition to the Brampton 2040 Vision, outlined below are the goals and objectives set out in several City policies, plans, and programs that support the Eco Park Program. The City Initiatives section provides a list of additional initiatives that support and assist in the implementation of the Eco Park Program.

### Brampton 2040 Vision: Living the Mosaic

Created in 2018, the City of Brampton's 2040 Vision is a strategic plan that captures the community's vision for how Brampton should evolve until 2040. It provides seven target vision statements, each with a set of catalytic actions. The first vision statement (Vision 1), "Sustainability and the Environment", calls for 'one-planet living'. This theme permeates the entirety of the 2040 Vision through the inclusion of more sustainable urban spaces, green space connectivity, and increased environmental stewardship. The creation of Brampton Eco Park is one identified action to achieve Vision 1.

*"In 2040, Brampton will be a mosaic of sustainable urban places, sitting within an interconnected green park network, with its people as environmental stewards – targeting 'one-planet' living."*

- Brampton 2040 Vision: Living the Mosaic

### Brampton Grow Green Environmental Master Plan (EMP)

Brampton's Grow Green Environmental Master Plan (EMP) aims to conserve, enhance and balance the City's natural and built environments to create a healthier, resilient, and environmentally sustainable city. The EMP outlines six core goals, including People, Air, Water, Land, Energy and Waste. The Eco Park Program aims to address all six core goals. Goals and action items within the EMP will inform the design and implementation of Brampton Eco Park and the Eco Spaces that form it. Eco Park principles directly align with multiple objectives of the EMP such as to protect, restore, and enhance natural features, functions, and linkages.



### **Parks and Recreation Master Plan (PRMP)**

The Parks and Recreation Master Plan (PRMP) looks at providing a sustainable system of parks, facilities, and programs. The Plan contains over one hundred recommendations spanning the delivery of parks and recreation facilities and services. In addition to providing recreational and social opportunities and spaces, one of the primary goals of PRMP is to protect and enhance Brampton's natural heritage features through initiatives including the naturalization of park spaces. The PRMP will be a strong guiding document for the implementation of the Eco Park Program within city parks, providing social and recreational city standards and goals.

### **Natural Heritage Environmental Management Strategy (NHEMS)**

To address the declining natural systems within Brampton, the City created the Natural Heritage Environmental Management Strategy (NHEMS). The NHEMS is a proactive approach to ensure that the abundance of natural heritage and built green spaces found in the city are conserved, restored, and connected to support the health and diversity of the natural and built environments. It addresses the implementation, management, and enhancement of the City's open space, green infrastructure and urban forest that contributes to sustaining the natural heritage system and ecosystem services. NHEMS will be a strong guiding document for the implementation of the Eco Park Program within or neighbouring Natural Heritage Systems, providing best practices and city standards for ecological systems.

### **City of Brampton Urban Forest Management Plan**

The Urban Forest Management Plan (UMFP) is currently being developed. It will provide a clear vision and guide how the City of Brampton should regulate, manage, enhance, and promote its urban forest. This will provide guidance in expanding urban forest within Eco Spaces.



### Natural Heritage Restoration Program (NHRP)

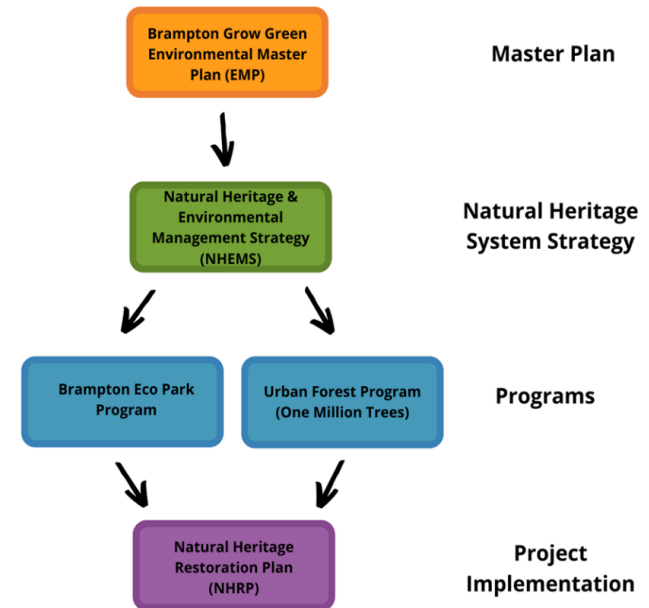
The Natural Heritage Restoration Program's (NHRP) primary focus is on restoring and naturalizing areas within the natural heritage system, parks, and infrastructure to address the historical conditions and current impacts on Brampton's Natural Heritage System. It will provide best practices and guidance for restoration efforts taken through the Eco Park Program.

In addition to this, NHRP's action plan includes implementation actions for projects stemming from the EMP, NEMS, Brampton Eco Park Strategy, and One Million Trees program. The action plan supplies all the on the ground implementation actions for specific sites, locations, projects, and activities relevant to the City's natural heritage and renaturalization programs including the Eco Park Strategy. This ensures clear, efficient, and coordinated plans are formed for the undertaking of natural heritage and renaturalization projects and related City initiatives.

### City of Brampton Official Plan, 2006 (September 2015 Office Consolidation)

The City of Brampton's Official Plan is a long-term plan used to guide and manage growth and development to meet the current and future needs of its residents. The Official Plan aims to preserve and enhance the ecological function of natural systems within the City. It aims to develop a culture of conservation that supports the application of practical and progressive energy, soil, land, water, and air conservation. It also speaks to managing, restoring and where possible, enhancing recreational open space to support and link elements of the natural heritage system.

### Brampton's Natural Heritage Project Implementation Framework



### Region of Peel Official Plan

The Region of Peel Official recognizes the importance of protecting, restoring, and enhancing natural systems in order to achieve long-term sustainability and well-being of the region. The Region promotes a harmonious relationship between people and the natural environment, and encourages the creation of public areas that reflect the distinctive social, economic, cultural, and natural characteristics of Peel as well as areas that promote civic engagement and social cohesion.



## Region of Peel Climate Change Master Plan 2020-2030

The Region of Peel's Climate Change Master Plan is a corporate plan that aims to build capacity, reduce GHG emissions, prepare for future climate conditions, and invest in sustainable approaches to finance action on climate change within the Region's operations. As part of the plan, the Region aims to protect and expand green infrastructure across Regional assets, including the Regional Road network. The implementation of this Climate Change Master Plan will help support the Brampton Eco Parks strategy through the creation of greener streetscapes, which will facilitate a connected Brampton Eco Park.

## 2.0 DEFINING BRAMPTON ECO PARK

### Consultation

The concept of Brampton Eco Park stems from the Brampton 2040 Vision. The Brampton 2040 Vision engaged over 15,000 residents to form its seven Visions and their associated actions. In addition to the Brampton 2040 Vision consultations, City staff and Conservation Authorities were consulted through a series of workshops during the processes of defining the Brampton Eco Park idea and the creation of this strategy to bring it to life.

## Defining Eco Spaces

*An Eco Space is not of singular design; rather, it is formed through a set of principles creating diverse and receptive systems.*

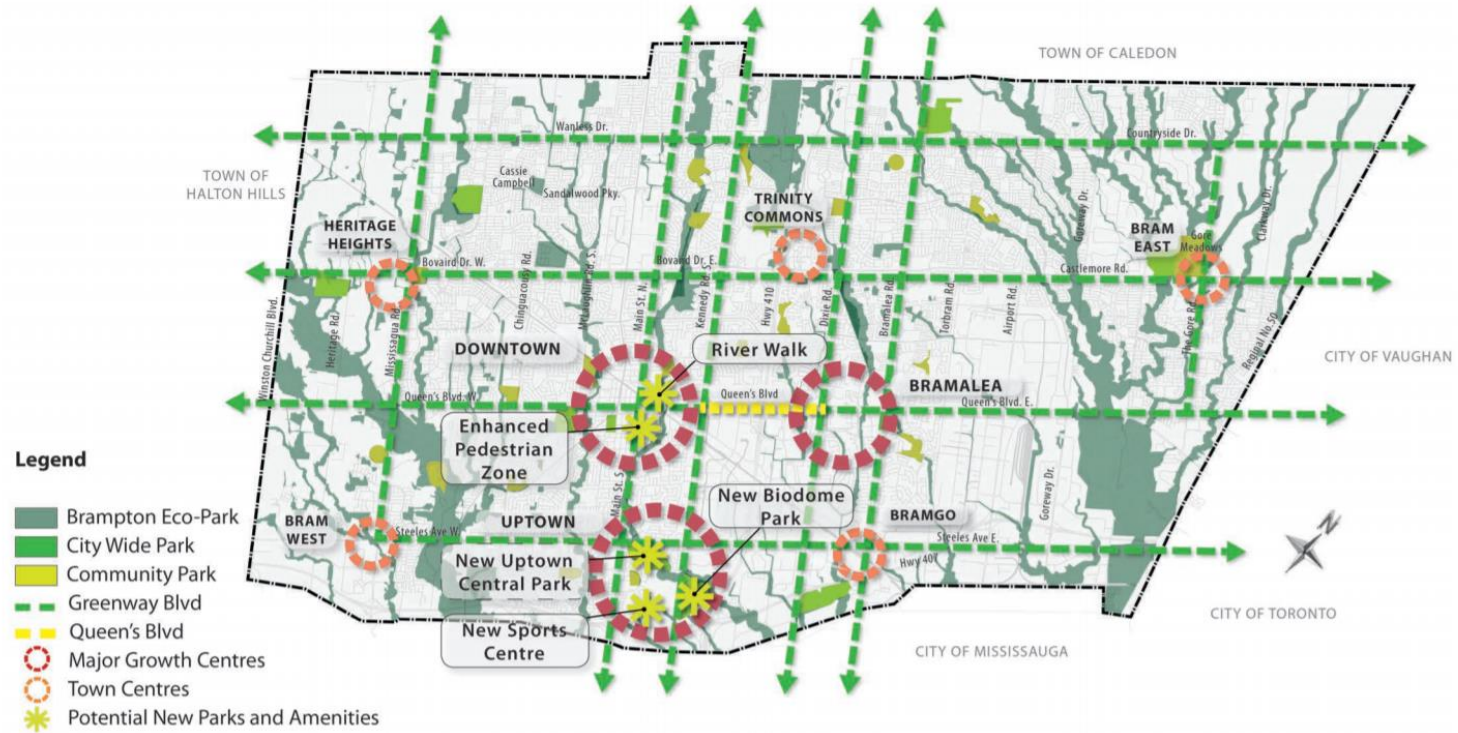
Brampton Eco Park is made up of a network of Eco Spaces. Eco Spaces are the building blocks of Brampton Eco Park therefore, by focusing on the creation and connection of Eco Spaces we are building Brampton's Eco Park. The shape and function of Eco Spaces will be different, some will be highly naturalized spaces, while others will be more urban, social spaces. Though the network of Eco Spaces may initially consist mainly of Brampton's NHS and parks, it is not limited to these land types. Other sites that provide opportunities for integration include, but are not limited to, are: streetscapes, urban plazas, grey and green infrastructure, utility corridors, school grounds, and private lands.

An Eco Space is a green area within Brampton that strengthens the coexistence of people and the environment by:

- i) cultivating and maintaining high-functioning natural systems and processes,
- ii) integrating opportunities for meaningful interactions and experiences between people and nature, and
- iii) actively striving to incorporate the seven guiding Eco Park principles.

The focus is to actively strive to enhance the environment both at the local and broader level. Strategies to minimize long- and short-term impacts on natural systems will be critical. The presence and utilization of natural systems, environmentally sustainable infrastructure, materials, technologies, construction, and maintenance, will all be key in achieving this goal.

## Brampton Green Network Designated as Brampton Eco-Park



Not a plan - for illustrative purposes only. All areas will be subject to full planning/co-design programs with citizens.

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Brampton 2040 Vision's Conceptual Map of Brampton's Green Network Designated as Brampton Eco Park

## **Criteria for Eco Spaces**

Eco Spaces must meet the three core criteria of i) enhance and maintain natural systems and processes, 2) integrate opportunities for meaningful social and environmental interactions and experiences, and 3) actively strive to incorporate the seven guiding Eco Park principles.

### **Criteria One: Enhance and maintain healthy natural systems and processes**

Eco Spaces maintain healthy ecosystems and natural features that support ecological processes and a diverse community of organisms. A healthy ecosystem provides habitat for a range of plants and animals, supports high-functioning ecological processes, and are often resistant or resilient to disturbance.

### **Criteria Two: Integrate opportunities for meaningful social and environmental interactions and experiences**

Eco Spaces provide opportunities for people to have meaningful interactions with each other and with nature. These interactions go beyond only experiencing nature, rather they encourage a deeper connection, appreciation, and/or understanding of nature. These interactions can be provided through site features and thoughtful design, for example, trails, gathering areas, outlooks, playgrounds, and seating. It can also be done through social programs such as educational or adventure programs, or research opportunities. Interactions and experiences must be sustainable and minimally impact, disturb or damage the natural area and processes of the space; for example, the Eco Park Strategy does not support active recreational activities and features (i.e. sports fields) that lead to significant impacts to existing natural heritage features within the City's natural heritage system.

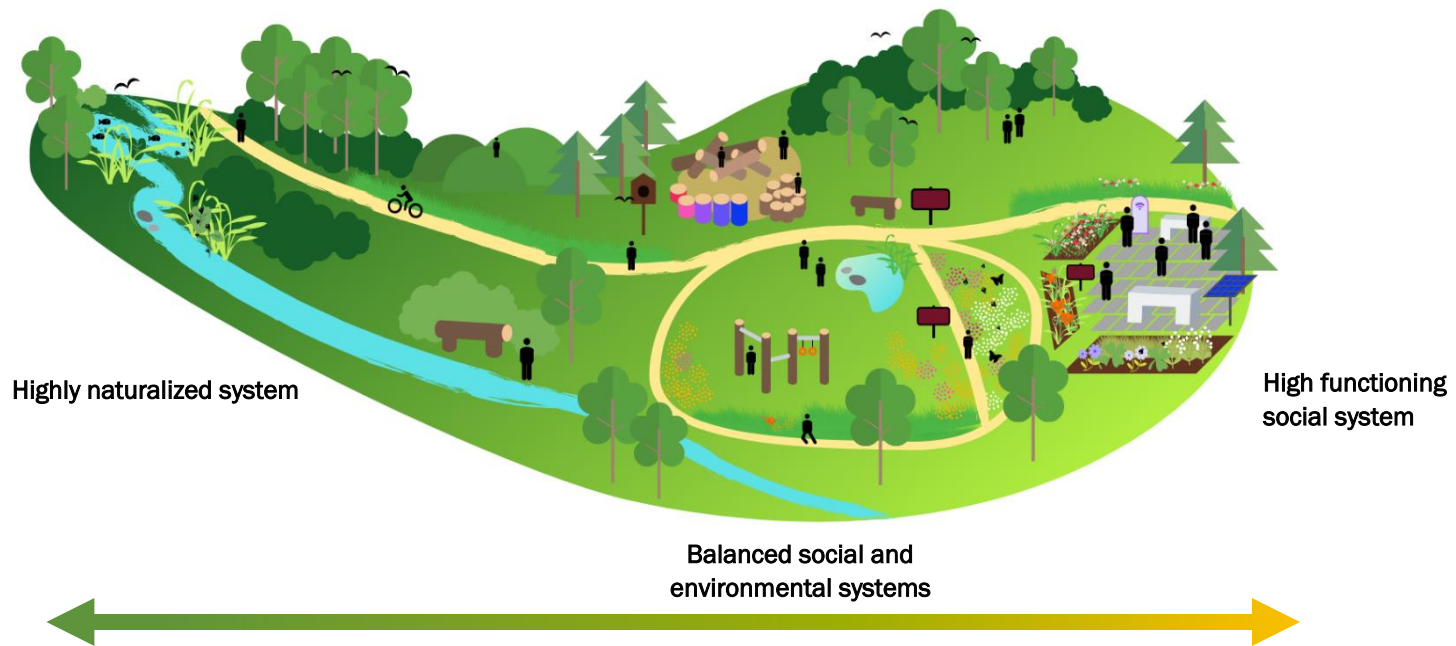
### **Criteria Three: Actively strive to incorporate the seven guiding Eco Park principles**

Eco Spaces must strive to incorporate Eco Park guiding principles. Eco Park principles provide the foundation for which Brampton Eco Park strives to ultimately achieve - an interconnected green network embedded into the fabric of the city's urban landscape, strengthening the coexistence of nature and people while also providing benefits to both. The Eco Park guiding principles and process will help clearly establish and recognize the intended purpose of a site while ensuring the two core criteria of Brampton Eco Park is effectively achieved. The principles will influence how sites are designed and managed, provide clear rationale and support for decisions for the site, and help communicate the benefits and purpose to the community and visitors leading to deeper community understanding and appreciation.

### **The Eco Park Spectrum**

All Eco Spaces fall within a spectrum of "green". They can be highly naturalized systems that permit gentle human interactions to highly functioning social landscapes, developed to engage visitors and readily activate human-nature interactions. The spectrum reflects the different forms Eco Spaces may emerge as, emphasizing that there is no one Eco Space design. Eco Spaces can and will be found in natural and urban areas across Brampton and reflect the needs of the local natural environment and Brampton community. At one end of the Eco Park spectrum, highly naturalized areas may be seen with carefully thought-out trails and benches. Strategic outlooks highlighting ecological features or over vistas are placed along the trails. Appropriate wayfinding and signage are placed throughout the area to educate visitors and encourage proper etiquette along trails and in the Eco Space. Some sensitive areas may be less accessible in order to maintain high ecological integrity or protect key ecological features and services.

On the other end of the spectrum, a park promoting passive activities among pollinator meadows may be present. Art could be displayed along wooded trails and an area provided that displays different types of sustainable gardens. There may be a technology zone constructed with permeable material for residents to congregate, relax, or bring work to that includes lighting, WiFi, and electrical outlets sourced by solar panels placed throughout the Eco Space. The goal of an Eco Space is the celebration and integration of Brampton's natural and cultural heritage. Primarily, Eco Spaces are the green places people go to relax, study, experience, and celebrate Brampton's natural heritage. The Eco Park program is about identifying, maintaining, and celebrating our green spaces while striving to achieve the Eco Park principles in Brampton's valleys, woodlands, and parks, as well as its streetscapes and yards.



## Eco Park Principles

### **1. Maximize ecological value**

The ecological value and integrity of all environmental site features and processes are maintained and maximized. This principle applies to both natural features and processes (e.g. natural wetlands, meadows, valley lands, forests) on site, as well as to environmentally engineered structures (e.g. constructed wetlands, green roofs, bioswales, rain gardens, stormwater management ponds). Depending on the requirements of the site this principle can be achieved through protection, management, restoration, rehabilitation, and /or design. Established and well functioning natural systems may only require protection and basic management of the site in order to maintain high ecological integrity and value. However, degraded sites or sites that see regular disturbance may need restoration and active management (e.g. removal of invasive, clear trail boundaries). Small and thoughtful design changes may also be able to reduce disturbance to the natural system from visitors (e.g. adjust trails away from erosion prone areas), or improve the functioning of the local system (e.g. no mowing along woodland edges to decrease edge effects). Natural systems that have been historically converted, or where significant components have been removed, may require rehabilitation (e.g. rehabilitation of channelized creeks) or more significant restoration (e.g. conversion of grass to woodlot). Finally, new sites would require proper design to ensure natural systems function as they should. An example of a space meeting this principle in Brampton would be Clareville Conservation Area, Eldorado Park, and Conservation Drive Park

### **2. Provide opportunities for social services**

Opportunities for passive, social, recreational, health, and cultural/community activities, programs and/or services through the utilization of natural and environmentally sustainable mechanisms are provided on site. There are many ways this principle can be reflected. Examples of opportunities are trail systems, picnic and seating areas, game tables, art or cultural displays, natural amphitheatres, fitness equipment, community gardens, and natural playgrounds. In the winter, designated toboggan areas, cross-country ski trails or snow-shoe trails could be provided. Furthermore, opportunities should be provided for social and cultural programs on site, such as health and fitness class, art workshops, community events, and outdoor education. Due to the unavoidable environmental impacts of certain recreational activities and their associated spaces, careful consideration must be taken before application. All activities that may impact the long-term integrity of the natural areas or features should be avoided. Cumulative impacts should be taken into account and all necessary actions should be taken to mitigate any short and long term environmental impacts. Natural or recycled material should be utilized when possible and a long-term environmental mitigation and maintenance plan created for the installment and maintenance of such areas. New installation of certain spaces such as sport fields are not to be considered in the City's Natural Heritage System. Installation of sport fields adjacent to important ecological features should be avoided due to their inevitable impacts to the environment. Example of current spaces in Brampton that reflects this principle are Heart Lake Conservation Area and Norton Park.



### **3. *Make nature visible***

Ecosystem services and ecological functions are highlighted and fully employed through thoughtful design mechanisms and appropriate infrastructure integration. Making nature visible through experiential design can provide a way for visitors to reconnect with nature by creating experiences within the park that allow visitors to feel part of nature and interact with the ecological systems nature provides. This can be achieved through design considerations such as creating strategically placed trails, resting spots, or outlooks overlooking vistas or oriented to draw the attention to key ecological features. Other experiential design mechanisms include natural playgrounds (e.g. wooden posts, large log pile, stump clusters, large boulders), or nature-based playgrounds (e.g. river and lakes with water pump, wooden playground shaped as native animals), natural or environmental sculptures or art along trails, bird boxes, or resting nooks among pollinator display gardens. Spaces can be provided that encourage for spontaneous nature-based art to occur. Signage can be placed that helps guides visitors through their nature experience. This can include signage that directs visitors in activities, educates visitors on the natural systems they are interacting with, or helps them find their way. Example of current spaces that reflect this principle are the County Court bioswale and the Etobicoke Creek Trail and associated parks.

### **4. *Design with nature***

The design, construction, and maintenance of the site minimizes environmentally destructive impacts by integrating itself with living processes. This maintains, and can even enhance, ecosystem functions and processes, and ensures the mitigation of impacts to the environment, during all life stages. For example this principle can be reflected through the use of natural or recycled materials to construct equipment, applying permeable pavement in parking lots, installing a bio swale and/or rain garden to maintain water quality, and increase water retention from street/trail runoff. This principle should also be reflected through site processes and operations, such as: keeping natural materials (leaves, fallen over logs, soil) on site by repurposing it or through natural decomposition; installing biofuel based lights fueled by dog feces; or creating an onsite composting program to collect compost from visitors or large events to be used for onsite plantings. Examples of current Brampton spaces that reflect this principles are Andrew McCandless Park.

## **5. Integrate with the surrounding community**

Eco Spaces should seamlessly integrate and connect with the local and wider community and ecosystem through an environmental, social, cultural, and physical lens.

### *Examples of Integration*

#### **Physical Lens**

- create a more gradual transition from the natural to urban landscape through streetscaping and tree plantings;
- connected trail network;
- easily accessible by transit;
- accessible by biking and walking; and
- providing bike racks.

#### **Environmental Lens**

- maintaining and building connections within and between ecological systems and processes (e.g. wildlife crossings, rehabilitation of channelized streams, removing trails or boundaries between two habitat types); and
- expanding natural features and utilizing utility corridors, streetscapes, city gardens, and green infrastructure to build natural corridors and help connect Eco Spaces to each other.

#### **Social/Cultural Lens:**

- providing accessible use and space for events, programs, and classes;
- picnic/ family areas, BBQ's, outdoor stoves or campfire; and
- partnerships with neighbouring institutions (hospitals, school boards, research institutions, senior homes) and community organizations for novel use of space such as pop ups, art displays, community events, festivals, programs/classes, and research.

#### **Economic Lens**

- providing local businesses to take stewardship of Eco Spaces by adopting a park; and
- providing opportunities for business to showcase novel green technologies.

A few examples of current Brampton spaces that reflect this principles are Massey Park, Kiwanis Memorial Park, and Elgin Woods Park.

## **6. Support innovation**

Sites foster and adopt social, environmental, and technical innovations to implement on site. Innovative solutions to more environmentally sustainable methods, construction, and design are supported on site. Due to the unique social and environmental dynamics of each site, new and individualized solutions may need to be adopted. Technology has also become an integral part of the human landscape, therefore, finding opportunities to integrate technological access through sustainable means are also supported, such as Wifi, electrical outlets, and lighting sourced by renewable energy. Buildings on site should obtain green building certifications (e.g. LEED, Passive house, Energy Star). Providing opportunities for local green business to showcase green technologies on sites can provide further opportunities to encourage and support innovation. Technological support can also come in the form of apps that relate to Eco Spaces, such as an interactive map of Eco Spaces and trails, or an app that provides activities that engage people outdoors such as seasonal scavenger hunts or geocaching. Examples of current sites that include and support innovation include Teramoto Park.

## **7. Reflect local identity**

Eco Spaces are constructed to reflect the cultural and demographic identity and social needs of the local community. How different cultural and demographic groups (e.g. sex, age, family units) use and enjoy the space as well as their relationship with nature should be included in Eco Space design. Eco Spaces should strive to encourage all residents to visit and build a positive relationship with nature. Incorporating friendly design elements from different cultures can provide the benefit of users learning new ways to use and enjoy the park.

Additionally, the identity and needs of local communities and neighbourhoods as well as the different expectations and uses of the people within different areas across Brampton should be considered. For example an Eco Space close to an arts hub populated by a diverse and young demographic could have sites that exhibits art work from local and multi-cultural artists and include design elements that inspire and accommodate creative expression (e.g. areas to lounge and relax, tables or surfaces to work on, an amphitheatre for performances, strategically placed seating areas overlooking vistas, or nooks nestled in unique settings). This approach can be applied for all types of community identities (e.g. technological oriented, family-focused, environmental conservation-minded, or health-focused), and are reflected by means of the experiences and services provided by nature. An example of a site in Brampton that reflects this principle includes Camp Naivelt, and Gage Park

## Present Day Brampton Eco Park (2020)

Currently, the City maintains roughly 4,775 hectares (NHRP, 2018) of natural heritage, the majority of which upholds the three criteria required to be Eco Space. All natural heritage areas are managed to maintain and enhance Brampton's natural areas and their ecological systems and processes. Additionally, most natural heritage sites are accessible through trails and parks to allow residents and visitors to enjoy and connect with Brampton's natural heritage system. Any natural heritage areas that do not integrate opportunities for meaningful social and environmental interactions and experiences, will be identified and an evaluation of these areas will be conducted to see whether there is opportunity to incorporate sustainable human-nature interactions. Some natural heritage areas may not be appropriate for an Eco Space as they contain habitats, wildlife, or ecological processes that are sensitive to any disturbance and/or play an integral role to the well-being to the wider natural heritage system or Brampton community.

Parkland in Brampton covers an additional 1,100 hectares (PRMP, 2016) across the city. Many of the City's existing parks could be integrated into Brampton Eco Park, while many others would need to be retrofitted to incorporate Eco Spaces. Staff will need to undertake further evaluation of the City parks system to determine if they presently meet the three criteria for an Eco Space.

Currently, best practices within Brampton streetscapes are increasingly integrating some of the criteria of Eco Spaces. The Brampton Million Tree Program is working towards increasing the canopy along roads and streets. The Active Transportation Master Plan promotes the integration of complete streets as well as building on the trail network throughout the city increasing

connectivity and walkability of the City. Furthermore, Brampton has started to explore integration of low impact development projects along roads to assist with stormwater management such as the County Court Bioswale.

The opportunity to integrate other urban spaces such as utility corridors, green roofs, urban plaza's and private property, will need to be further investigated at this time.

Eco Spaces must also strive towards the seven Eco Park principles. This Eco Park strategy discusses many of the City programs currently available for NHS, Parks and other urban spaces that can be utilized to help achieve some of the principles. Additionally, this strategy also includes recommended changes to city programs, and additional actions necessary to further enable Eco Spaces to meet these principles.



## 3.0 IMPLEMENTATION

### The Vision Lenses

The Brampton 2040 Vision includes five strategic lenses in which actions must reflect to maximize the success of the 2040 Vision. The lenses of Public Engagement, Collaboration, Design, Technology, and Identity were identified as advanced practices in, or that suit, the unique situation of Brampton. Honouring this commitment, the development of the Eco Park Strategy will closely align with these lenses. The following table outlines how each of these lenses will be reflected by and integrated into the Eco Park Program:

#### Public Engagement

- Eco Spaces encourage the expression of cultural and local identity of the local community. Citizens, businesses, and local organizations will be provided opportunities to be involved with the design and establishment of local Eco Spaces through consultation workshops, outreach opportunities, and public engagement events.
- The Adopt a Park Program will integrate Eco Park principles.
- The establishment of the Adopt a Park Working Group will help empower local residents and businesses to become strong stewards of local Eco Spaces.

#### Collaboration

- The Eco Park Program takes on an inclusive view, bridging multiple areas that are often considered in isolation, such as:
  - Parks and the Natural Heritage System,
  - Natural systems and the local community, and
  - Nature and urban landscapes.
- The Eco Park Strategy aims to connect City departments, the Region, and the local Conservation Authorities, citizen groups, and residents to implement the broad range of emerging sustainability initiatives within the City of Brampton. Rather than

viewing Eco Spaces as stagnant areas within the municipal landscape, they are viewed as providing active services to the city and managed as such through an asset management plan.

- There are opportunities for the Brampton Environmental Advisory Committee (BEAC) to be involved with Brampton Eco Park through advocating for Brampton Eco Park and helping to create beneficial community partnerships and collaboration opportunities.
- Collaborations between local businesses, industry and knowledge leaders, as well as interest groups can help form the creation of Eco Spaces.
- Collaboration with neighbouring facilities and institutions are encouraged through the Eco Park principles, to create unique and beneficial partnerships and integration opportunities, including with local schools, hospitals, wellness centres, hospice, community centres, and retirement homes.

#### Design

- The foundation of the creation of Brampton Eco Park is based on green and thoughtful ecological and sustainable design.
- Eco Spaces are designed with intention, where each element within Brampton Eco Park has a clear role in enhancing Brampton's natural heritage and achieving a more sustainable, livable, active, diverse, and healthy Brampton.
- Eco Spaces are designed for the harmonious coexistence of people and nature, and to utilize natural systems and local stewardship in order to maintain high self-sufficiency.
- The creation of the Green City Working Group will operationalize the design process for the Brampton Eco Park and ensure best ecological and sustainable practices are utilized and maintained.

#### Technology

- Eco Spaces provide potential for the integration and implementation of new sustainable technologies and nature-based solutions.



- Eco Spaces rely on the innovation and integration of new and sustainable types of building materials, methods of design, construction, management, and green technology that minimizes impacts to the environment and celebrates the processes the natural environment provides to our community.
- Eco Park principles encourage the integration of green technologies into natural heritage spaces, parks, open spaces, green streetscapes and utilities.
- A Brampton Eco Park Map app will be created and will include a map of Eco Spaces across the City, their connections, their benefits, and the services/programs they provide.

#### Identity

- Eco Spaces are designed to reflect a community's natural and cultural heritage values in an environmentally and economically sustainable way.
- Collaboration and engagement with the local community, including local residents, businesses, organizations, and institutions will ensure identify reflection is realized.
- Eco Park principles integrates public features, art, and social/cultural program into Brampton Eco Park design.

### Community Engagement Opportunities

The Brampton Eco Park Program is a unifying initiative that connects many current city plans, programs, and policies ongoing across City departments. The Brampton Eco Park Program aims to bridge these efforts and empower stronger coordination between these initiatives. By building on existing initiatives and strengthening coordination between them, resources can be shared and redundancies reduced, helping collaborating initiatives further their goals while reducing overall cost and time needed for initiatives if done separately. Pooling resources can also increase the capacity to implement larger and more

impactful actions that further the objectives of all involved initiatives.

#### Adopt a Park Program

The City of Brampton's current Adopt a Park Program encourages families, neighbourhoods, schools, civic groups, businesses, and individuals to get involved in the preservation and enhancement of the parks system. Volunteers can donate time and resources to give special care to a City park by helping maintain, beautify, and enhance the park and keep it safe for all to enjoy. Through an adoption, volunteer groups commit to organizing and leading clean ups and other stewardship activities for a two-year period.

The Adopt a Park Program provides the groundwork for the *Adopt a Park Working Group*, a community-led stewardship group that takes on the role of stewardship advocacy, Eco Park training, and assists with the development of Brampton's Eco Park. It is recommended that the Adopt a Park Program be expanded to encompass promoting Eco Park stewardship as it already has the foundational framework for implementation and complementary goals that align with the Eco Park principles. Volunteers signed up through the Adopt a Park program will be trained, and provided resources and responsibilities to help maintain or to obtain Eco Park principles in their park. They will also be provided support in how to engage and educate their local neighbourhood about Brampton Eco Park. Additionally, a Working Group made up of representatives from each Adopted Park can meet periodically. This provides a stage to:

- create an Adopt a Park network in which volunteers can share ideas, advice, challenges, and accomplishments;
- educate and train volunteer groups and provide workshops on the Eco Park principles;
- provide resources to help volunteers maintain Eco Park principles in their park;

- foster innovation between volunteer groups;
- help with outreach and education within their community about the Brampton Eco Park Program;
- gain input on Eco Park designs, programs, and where or what should next focus on in Brampton Eco Park;
- assist with the expansion and community engagement of the Adopt a Park Program; and
- organize the annual Brampton Eco Park celebration.

#### **Brampton Environmental Advisory Committee (BEAC)**

A citizen advisory committee of council, the BEAC assists, educates, and engages the community to advance the goals and actions of the City’s *Grow Green* Environmental Master Plan (EMP). It acts as City’s liaison and forum on environmental issues to the public, and collaborates with other internal and external advisory committee, environmental partners, and agencies to achieve the City’s environmental mandates and goals.

Community leadership is required to reinforce local and regional conservancy and stewardship of the Eco Park Network. BEAC provides a natural option to take on this role as stewards of advocating the EMP and sustainable initiatives within the City. BEAC can provide support by:

- educating the public about Brampton Eco Park and Eco Park principles;
- advocating and communicating Eco Park initiatives and progress to the community and Council;
- expanding the Grow Green Network to bring in partnerships with local organizations, industries, and institutions to support Eco Park;
- promoting the Adopt a Park program and Adopt a Park Working Group, and encourage local citizens and organizations to apply; and
- fostering environmental stewardship among Brampton residents through a stewardship strategy.

## **COMMUNITY INTEGRATION AND PARTNERSHIPS**

### *Massey Park*

Massey Park contains a trail system though two large woodlots. The Massey Street Public School is directly adjacent to the park with part of its play area incorporated into the park itself.

Strong partnership between the park and the school has led to the addition of an outdoor school classroom within the park space, utilizing natural materials and displaying art pieces. Additionally, regular events that promote park stewardship are conducted in conjunction with the school, such as restoration plantings, educational tours, workshops, and community celebrations.

The partnership between Massey Park and the Massey Street Public School displays how an Eco Space can be integrated into the everyday life of the local community, build stewardship, and strengthen a community’s connection to nature. It is a good example on how Eco Spaces can partner with neighbouring institutions or industries to provide unique social and community resources and benefits.



### Parks Environmental Stewardship Program

The City of Brampton's Parks Community Development team has a variety of educational stewardship programs for students in Kindergarten through Grade 8. Educational programs are free of charge, adhere to the Ontario Curriculum, and include in-classroom lessons and activities related to a range of topics including urban forest, pollinators, urban wildlife, natural heritage restoration, stormwater management, and other sustainability themes.

Working with the Parks Environmental Stewardship Program, educational programs can be expanded to include learning about Eco Park principles. Through this program, educational workshops and/or volunteer events for both children, adults and businesses can be conducted. At these events, participants can help with plantings and retrofits of new Eco school spaces, or experience stewardship responsibilities throughout the city including those of a Adopt a Park volunteer. Participants can also learn about how to be a mindful visitor within Eco Spaces.



### City Initiatives

#### Valleyland Naturalization Program (City of Brampton, 2002)

The Brampton Valley Naturalization Program commenced in 2002 and restores native plant communities in the City's valleylands that have been impacted by past agricultural practices and development. The program results in a variety of ecological benefits, such as introducing new wildlife habitat, improving fish habitat by stream cooling, and flood plain stabilization. The social benefits of the program are also significant as the new plantings add to the attractiveness of these valleylands, promoting casual use of the valleys by hikers, naturalists, and community groups.

#### Nurturing Neighbourhoods Program (Neighbourhood Audit)

The Nurturing Neighbourhoods Program was developed following the recommendation from the 2040 Vision that Complete Neighbourhood Audits be conducted to "systematically update and revitalize existing neighbourhoods to ensure the full provisions for comfortable sustainable living".

Three pilot neighbourhoods of different ages (old, middle, and new) were selected to develop a Neighbourhood Audit Tool through resident surveys and guided neighbourhood walks. The tool will be used in conjunction with the Sustainability Assessment Tool to conduct audits in additional neighbourhoods. The results of the audits will be used to inform decisions around the prioritization of neighbourhood revitalization projects, such as green infrastructure and street tree plantings.



## ECO PARK DESIGN

### Andrew McCandless Park

Andrew McCandless Park is a convergence of active recreational opportunities and naturalized systems. It includes part of the Huttonville Creek that is identified as a wetland. During construction the wetland was recreated and naturalized.

Consisting of soccer and cricket fields, a splash pad, skateboard ramps, playgrounds, gazebos, and trails, Andrew MacCandless Park provides a wide range of recreational opportunities for all ages within an ecological conscience setting. It integrates bioswales, naturalized corridors, and native plantings interwoven into the design of the park. It highlights ecological elements on site including the wetland through trail systems, natural vistas and outlooks, and nature themed playground and splash pad.

Andrew McCandless Park provides a good example of the Eco Park principles through its design. It celebrates nature and integrates ecological design with community facilities, supplying active recreational spaces and enhancing and protecting Brampton's natural heritage assets.



### Sustainable Neighbourhood Retrofit Action Program

The Sustainable Neighbourhood Action Program (SNAP) is a revitalization program for existing neighbourhoods that aims to accelerate urban renewal and increase climate resilience at the local scale. It takes a holistic approach to urban retrofitting and prioritizes the implementation of green and adaptive infrastructure around core themes of stormwater management, energy efficiency, water conservation, and natural heritage. It works closely with the local community to identify and achieve long-term adaptation and sustainability within their neighbourhood.

Projects related to this program are conducted in partnership with municipalities, the Toronto and Region Conservation Authority (TRCA), Credit Valley Conservation (CVC), and the Region of Peel. There are currently two SNAPs in Brampton: County Court, located near Main Street South and Steeles Avenue West, and Fletcher's Creek, located near Chinguacousy Road and Queen Street West. Some of the initiatives of the SNAP include home retrofits, tree planting events, and gardening workshops.

### One Million Trees Program

One of the catalytic actions identified in the Brampton 2040 Vision is to grow the urban forest and improve climate resilience and the delivery of ecosystem services through the planting of one million trees in the city by 2040. To identify how to achieve this target, the One Million Trees Program was created. It contains goals, strategies, and actions including but not limited to, planting opportunities within streetscapes, parks, new and existing development, as well as community education and engagement. This program will help increase the City's urban tree canopy overall. For Brampton Eco Park development, it can enhance spaces that need increased naturalizations by improving tree canopies. It can create or expand on woodlots within Parks and

along valleylands enhancing Brampton's natural systems. Trees planted in parks or trails in Eco Spaces can provide shading and weather protection for visitors in parks or along trails. The Million Tree Program can also help create connections between Eco Spaces through streetscape tree plantings. Streetscape plantings can connect natural areas and also improve walkability and biking to and from Eco Spaces by making sidewalks and bike routes more attractive.

### Capital Projects

Two streams of Capital Projects will be critical for the implementation of Brampton Eco Park. First is Parks Capital Projects, including the planning, design, and construction of parks and open spaces in Brampton. Secondly is Roads Capital Projects which includes various infrastructure projects as part of the City's 10-Year Roads Capital Program. These projects are for the expansion and improvement of the City's road network to accommodate the growth of the City.

Capital Projects provide enhancement and retrofitting opportunities. Coordinating with these projects to align and incorporate Eco Park principles to applicable assets, can mitigate resource requirements in the long and short term as well as help integrate Eco Spaces across the City's urban landscape.

### Up-coming Opportunities

#### Jefferson, Jordan, and Jayfield Park Channel Restoration

As part of the Natural Heritage Restoration Program, the City of Brampton and TRCA identified an opportunity to rehabilitate the channel traversing through Jefferson, Jordan, and Jayfield Parks. Currently, the portion of river channel running through the parks is entirely concrete-lined. Restoration and naturalization efforts will look to removing the concrete channels and create a more natural meandering flow, supported and lined by naturalized

## STEWARDSHIP

### *The Friends & Stewards of Dorchester Park*

The Friends & Stewards of Dorchester Park are a local community group that operates as a member of the Adopt a Park Program. Its formation was community-led and was established by a group of strong local community advocates. Through their coordinated efforts The Friends & Stewards of Dorchester Park, have held multiple community events annually, fostered stronger stewardship within the local community, and helped foster more sustainable and community friendly initiatives within the park, such as signage, sustainable winter trail maintenance practices, community workshops and tours, and community park events. They also actively assist with the maintenance, restoration and protection of the park. The City of Brampton's role has been a supportive one, providing resources and partnership opportunities to help them implement their ideas and projects.

The Friends & Stewards of Dorchester Park reflects the strong stewardship and community engagement Eco Park aims to achieve in all Eco Spaces. They provide a good example of the role communities can play in establishing the Eco Park Network and how the City of Brampton can support them. Encouraging, promoting, and actively fostering strong stewardship will be a critical component for the formation of Brampton Eco Park.





buffers, wetlands, and ponds. In conjunction with the restoration, retrofits to the three parks are also being explored.

#### **Credit Valley Conservation Trailhead Eco Park - 2719 Bovaird Drive West Property**

The property of Bovaird Drive West located at the North West corner of Bovaird Drive and Heritage Road, is 352,497.14 m<sup>2</sup> and owned by the City of Brampton. This property contains valleylands with multiple ecological features that provide an exciting opportunity to transition the property into an Eco Park center.

#### **Claireville Conservation Area**

Discussions with TRCA are currently underway to incorporate more programming and passive activity within the Claireville Conservation Area. Utilizing the Eco Park principles for these new designs and programming will ensure the integrity of the NHS is respected and maintained, while also finding strategic opportunities that allow residents to utilize and appreciate the space in an ecologically-minded way.

#### **Brampton Riverwalk Project**

The provincial government has designated downtown Brampton as a Special Policy Area (SPA). This designation recognizes that the area lies within the regulatory floodplain, however, also that it represents the heart of Brampton and should be maintained as a place to invest and do business. Brampton Riverwalk project is the City's solution to this problem. It aims to reconfigure the channel of Etobicoke Creek to address the climate and the flood risk to Brampton's downtown. Incorporating Eco Park principles into the design would lead to more benefits to the municipality and local community in the long-term.

## **Anticipated Challenges and Tools to Overcome Them**

#### **Internal Coordination: The Green City Working Group**

Internal partnerships, collaboration, and coordination are critical for the successful achievement of the Brampton Eco Park vision. The Brampton Eco Park Program aims to bring together many of the sustainable initiatives underway in the City of Brampton. It will take the collaborative effort and support of City departments to effectively realize the Brampton Eco Park. Forming close partnerships and actively engaging critical staff across departments at every level will increase coordination, leading to more effective and efficient implementation. Actively seeking opportunities to integrate or align with current and future city initiatives in order to share resources, increase efficiency, and reduce costs are strongly encouraged. A few examples of opportunities to partner and collaborate include:

- large Capital projects, such as Brampton's Riverwalk project, Trailhead Eco Park, street revitalizations, and Jefferson, Jordan, and Jayfield Park Channel rehabilitation;
- tree planting projects with Forestry, and
- park retrofitting projects with Parks Planning.

To directly mitigate and help address this challenge, the Green City Working Group will oversee the undertaking of the Brampton's Eco Park Strategy. The Green City Working Group is a cross-functional collaboration team created to increase coordination around actions of the NHRP, therefore, leading to more effective and efficient implementation of NHS programs, including that of Brampton Eco Park. It currently includes key players needed in implementing and coordinating the Eco Park Program (i.e. Environmental Planning, Open Space Development, Parks Planning, Parks Maintenance and Operations, Urban Forestry, Park Capital, and Conservation Authorities'). Within the

Brampton Eco Park program, their focus will be the coordination of Eco Park formation. Some of their tasks include updating standards, the achievement of Brampton Eco Park actions and goals, identifying hubs and retrofit opportunities, approving Eco Space designs, and ensuring collaboration with other City staff and departments is conducted when appropriate.

### **Community Empowerment**

Empowering Brampton residents, communities, and neighbourhoods to take stewardship of their local Eco Spaces is critical for the long-term success and maintenance of Brampton Eco Park. Brampton Eco Park's ability to scale up and expand will be reliant on the built capacity created by community will. This will be based on a community's sense of stewardship towards their parks, communities, and environment. Collaboration with local communities should include empowering them to take on stewardship of the local and greater network of Eco Spaces. Empowerment should be focused on businesses, institutions, residents, and internal municipal staff. Partnerships with neighbouring institutions and groups such as schools, hospitals, and knowledge institutes will be pursued. Three key actions expanding upon current established initiatives will help address this challenge: 1) the expansion of the Adopt a Park Program, 2) BEAC's partnership, and 3) development of an Eco Park educational series through the current Parks Environmental Stewardship Program.

The expansion of the Adopt a Park Program and the establishment of the Adopt a Park Working Group will provide wide community support and action. Through this, a strong volunteer base focused on maintaining and supporting Eco Spaces at the local level will provide long term stewardship of the larger Brampton Eco Park.

Secondly, BEAC could provide community leadership and support for Brampton Eco Park at a wider scale, helping direct long-term goals, creating partnerships, developing or attending outreach events, and advocating for Brampton Eco Park interests to Council and the community.

Lastly, building educational programs for both children and adults by partnering with the current Parks Environmental Stewardship Program will help educate the community and develop greater stewardship within the public.

## **Considerations for Implementation**

### **Parks vs Natural Heritage Systems**

While Brampton's NHS policies focus on the conservation and enhancement of ecological systems, Brampton's Parks and Recreation policies focus on the recreational and social needs of the community. Brampton Eco Park hopes to provide a bridge between these two systems, as well as integrate other community values and needs. Ideally, the Brampton Eco Park Program maintains that ecological conservation and the provision of social amenities are approached not as separate components, but as an integrated whole. However, the current framework and policies in place require each to be approached differently for successful implementation. Therefore, Eco Park principles develop a sliding scale of park design in order to improve human and environmental coexistence.

The Eco Park Program is not intended to replace the NHS or the Parks and Recreation priorities, rather it provides an avenue to bridge efforts and priorities to better respond to community needs and expectations. The focus of each Eco Space will adjust to local environment and community needs and identity.





### Streetscapes, Utility Corridors, and Urban Design

At a landscape scale, Brampton Eco Park is not delineated or considered separate from the surrounding neighbourhood and urban form, instead it is a critical and integrated piece, connecting and integrating into services and features within the urban landscape and community. Therefore, Eco Park principles and ecological design are not to be confined to just Parks and NHS, but also applied into streetscapes, utility corridors, and urban design.

Eco Park principles can be applied along our streets, roads and major transportation corridors to create ecosystem benefits that are more widespread across the city landscape as well as provide more gradual transitions between our natural and urban areas. Applying Eco Park principles to streetscapes has the potential to produce a more evenly spread 'green' landscape across the city. This not only creates a more attractive living space, but also can mitigate climate impacts to the City and its residents, such as, providing protection from flooding and intense rain events, maintaining a cooler environment during heat waves, providing protection from cold and strong winds in the winter, and reducing severity of drought. Applications of Eco Park principles within streetscapes include, but are not limited to:

- increased tree plantings along roads;
- appropriate plantings in medians;
- implementing low impact development (LID) options to manage runoff along roads and pavements; and
- greater application of the 'Complete Streets' design.

Utility corridors can provide a valuable opportunity for integrating Eco Park principles. Often their long mowed paths across the landscape negatively impact local habitats and maintain little to no ecological value. However, due to their prevalence and accessibility, utility corridors have the potential to connect natural landscapes to each other and be a critical resource for local

wildlife. Additionally, naturalized utility corridors can provide direct benefits to local municipalities and local residents including but not limited to keeping urban areas cooler in the summer, increasing protection from strong winds, mitigating noise, reducing runoff load into storm sewers, and protection from flooding. Application of Eco Park principles on these site can be done through:

- applying Integrated Vegetation Management (IVM), a practiced approach involving selecting and combining vegetation treatments to target only specific plant species that pose a risk to safety or reliability to the utility, while minimizing impacts to the environment and the public;
- integrating trails into hydro and TCPL corridors;
- providing a space for community gardens, dog parks, and passive activities; and
- creating compatible habitats along, and in, utility corridors such as meadows and butterfly habitat where applicable.

With proper urban and ecological design, there are various types' urban spaces that have the potential to be transformed into Eco Spaces. Examples of other potential spaces include but are not limited to are vacant lots, green roofs, and backyards.

Utilizing these urban spaces will be critical in creating a bridge between natural and urban forms of the city, forming a more integrated and transitional landscape between natural and engineered infrastructure.

### Existing vs New Development

Two different approaches will need to be integrated into the action plan and coordinated for the implementation of the Eco Park Program. One will be the integration of the Brampton Eco

Park strategy and principles in new development and projects. The other will be focusing on retrofitting existing parks to meet the Eco Park principles.

## Funding

### Eco Park Funding Strategy

Brampton Eco Park focuses on utilizing and partnering with already existing and upcoming initiatives, projects, and opportunities to implement its goals. Provided below are some of the current opportunities available, as well as future opportunities that will be included in the Eco Park Funding Strategy.

### Internal Funding

#### Capital Projects

When applicable, Eco Park principles will be integrated into Capital Projects, improving efficient use of resources. Additionally, consideration should be given to dedicating a percent increase of funding to Capital Projects to retrofitting spaces (e.g. Parks, NHS, streetscapes, urban plazas, stormwater ponds, etc.) towards achieving the criteria for Eco Spaces. This percent allotment per project will be required to be spent on meeting the criteria for Eco Spaces and/or striving to achieve the Eco Park principles within the project or associated area in order to improve and expand Brampton Eco Park. This will ensure funding for these renewal projects, as well as the establishment of Eco Park principles throughout the city landscape. This aligns with the Parks and Recreation Master Plan Recommendation #17 which states:

*“In conjunction with the Asset Management Plan and future growth management exercises establish a prioritized list of parkland renewal projects to be undertaken over the next fifteen year’s. A capital funding plan should be developed in support of this parkland renewal plan.” - PRMP, 2017, pg. 40*



### ***Urban Forest Management Funding***

The City of Brampton is currently developing an Urban Forest Management Plan. There is opportunity for the Eco Park Program to coordinate funding with the Urban Forest Management Plan for Eco Park projects that enhance or maintain Brampton's urban forest.

### ***Stormwater Charges***

In 2020, the City of Brampton is initiating a stormwater user fee for all residents and business. Some of the funds from these charges may be available for Eco Park projects that help with stormwater management within the city.

### **External Funding**

#### ***Private***

Private funding for Brampton Eco Park projects is available through application to the following source:

TD Green Streets (Tree Canada and FEF): TD Friends of the Environment Foundation (TD FEF) is a national charity that funds environmental projects across Canada. It strives to green cities and towns across the country by supporting innovative practices in municipal forestry.

#### ***Federal Government***

Environmental Damages Fund: Provides funding from local environmental fines, court orders, and voluntary payments to projects that will benefit the natural environment. Included are projects that address restoration, environmental quality improvements, research and development, and education and awareness.

## **ECO PARK GROUPS OVERVIEW**

### **The Green City Working Group**

The Green City Working Group is a cross-functional collaboration team created to increase coordination around actions of the NHRP, therefore, leading to more effective and efficient implementation of NHS programs, including the Brampton Eco Park Program. It currently includes key players needed in implementing and coordinating the Brampton Eco Park Program (i.e. Environmental Planning, Open Space Development, Parks Planning, Parks Maintenance and Operations, Urban Forestry, Park Capital, and Conservation Authorities'). Within the Brampton Eco Park program, their focus will be the coordination of Eco Park formation. Some of their tasks include updating standards, the achievement of Brampton Eco Park actions and goals, identifying hubs and retrofit opportunities, approving Eco Space designs, and ensuring collaboration with other City staff and departments is conducted when appropriate. See page # for more details

### **Adopt a Park Working Group**

An extension of the Adopt a Park Program, the Adopt a Park Working Group will be made up of representatives from Adopt a Park volunteer groups. They create an Adopt a Park network in which volunteers can share ideas, advice, challenges, and accomplishments, help educate and train Adopt a Park volunteer groups, and conduct outreach activities to promote the number of Adopt a Park groups. See Page # for more details

### **Brampton Environmental Advisory Committee**

Community leadership is required to reinforce local and regional conservancy and stewardship of Brampton Eco Park. As an already established Environmental Committee, BEAC provides a natural option to take on this role of advocating for Brampton Eco Park with the community. See page # for more details.





### ***Federation of Canadian Municipalities (FCM)***

The federal government provides multiple funding opportunities in partnership with FCM. Municipalities may apply for grants through the FCM to fund climate change-related projects.

Climate Adaptation Pilot and Capital Project Grants: Grants for pilot and capital projects that find innovative solutions that help municipalities adapt to climate change through managing and revitalizing of natural assets such as:

- urban tree canopy to support temperature management;
- green infrastructure for stormwater quality control;
- water conservation initiatives; and
- energy efficient and low carbon use structures.

Climate Adaptation Partners (on hold): Helps municipalities prepare for, and adapt to, climate change and to reduce emissions of GHG emissions. Types of eligible projects include managing or developing natural assets such as trees, wetlands, and creeks as well as assessing the impacts of residential water conservation program.

## 4.0 FIVE YEAR ACTION PLAN

### Goal 1: Analyse and Identify

To analyze and identify the Eco Park Network.



**Strategy 1.0** Develop a holistic understanding of the City's existing Eco Park assets.

<b>1.1</b>	Develop a list of Parks and NHS to first target for initial Eco Park establishment.	Short Term
<b>1.1.1</b>	Inventory current Eco Spaces within Brampton.	Short Term
<b>1.1.2</b>	Identify parks and NH areas that would be prime candidates for Eco Spaces.	Short Term
<b>1.1.3</b>	Identify retrofit opportunities based on current and upcoming Capital Projects.	Short Term
<b>1.2</b>	Establish Eco Park "Hubs" and expand from them.	Long Term
<b>1.2.1</b>	Identify Eco Park "Hubs" where Brampton Eco Park expansion will be focused and built upon.	Short Term
<b>1.2.2</b>	Develop and implement a staged plan prioritizing when parks and NHS will be retrofitted to Eco Spaces and integrated into the Hubs.	Short Term
<b>1.2.3</b>	Develop and implement a strategy on how and where Eco Spaces within Hubs will be connected or linked including through, utility corridors, streetscapes, new parks, NHS etc.	Mid Term
<b>1.2.4</b>	Develop and implement a strategy on how Eco Park Hubs will be connected.	Long Term
<b>1.3</b>	Develop an Eco Park toolkit.	Short Term
<b>1.3.1</b>	Develop an Eco Park checklist/form based on the Eco Park principles to identify current spaces that are Eco Parks and potential candidates for conversion to an Eco Space.	Short Term
<b>1.3.2</b>	Develop an Eco Park best practice guideline that provides guidance on how to achieve Eco Park principles.	Short Term
<b>1.3.3</b>	Create an ongoing community activities list that provides guidance for the work that can be completed by Adopt a Park volunteers.	Shot Term



## Goal 2: Implement

To ensure efficient and effective implementation of the Eco Park Strategy.



**Strategy 2.0:** Increase the size and connectiveness of Brampton's Eco Park through the planning, design and construction of new Eco Spaces in new and existing natural heritage spaces, parks, streetscapes, utilities corridors, and yards.

<b>2.1</b>	Mobilize the Green City Working Group to focus on the design, construction and implementation of Eco Spaces.	Short Term
<b>2.1.1</b>	Identify how current City and Conservation Authorities 'programs and initiatives can contribute or be integrated into Eco Park implementation processes.	Short Term
<b>2.1.2</b>	Collaborate and share expertise on maintaining Eco Park principles, including in the design, construction, and maintenance of Eco Spaces.	Short Term
<b>2.5</b>	Expand Eco Park outside of NHS and Parks.	Mid Term
<b>2.5.1</b>	Develop guidelines on how to integrate Eco Park principles into streetscapes.	Short Term
<b>2.5.2</b>	Develop a strategy on how to integrate Eco Park principles into utility corridors.	Mid Term
<b>2.5.3</b>	Develop a plan on how to integrate Eco Park principles into residential and private properties.	Long Term
<b>2.5.4</b>	Develop a strategy on how to connect streetscapes, utility corridors and residential properties to Brampton Eco Park.	Mid Term
<b>2.6</b>	Develop and implement an Eco Park retrofit program.	Long-term
<b>2.6.1</b>	Build partnerships and processes with internal departments, including but not limited to Capital Projects, Parks, and Forestry, to help implement retrofit programs.	Ongoing
<b>2.6.2</b>	Update Capital Project guidelines and standards to include Eco Park processes and principles.	Short Term
<b>2.6.3</b>	Work with the Green City Working Group to design retrofits for parks.	Ongoing
<b>2.6.4</b>	Work with the Adopt a Park Working Group and Green City Working Group to identify retrofit locations.	Ongoing

	<b>2.6.5</b>	Develop an Eco Park retrofit strategy.	Ongoing
<b>2.7</b>		Create a plan that supports a connected Eco Park.	Mid Term
	<b>2.7.1</b>	Update Wayfinding signage throughout Brampton Eco Park.	Long Term
	<b>2.7.2</b>	Work with Transportation Planning on integrating the Brampton Trail Network into Brampton Eco Park.	Ongoing
	<b>2.7.3</b>	Work with Brampton Transit to identify vital transit connections to key Eco Spaces.	Long Term
<b>2.8</b>		Integrate Eco Park principles into new development.	Short Term
	<b>2.8.1</b>	Integrate Eco Park principles in to the Sustainable Development Guidelines.	Short Term
	<b>2.8.2</b>	Integrate Eco Park principles in to the Landscape Guidelines.	Short Term
<b>2.8</b>		Integrate Eco Park Program into City plans, policies, and processes.	Short Term
	<b>2.9.1</b>	Integrate relevant Eco Park policies into the Official Plan during the upcoming review.	Short Term
	<b>2.9.2</b>	Integrate Eco Park Program into existing and new environment planning plans and policies including: <ul style="list-style-type: none"> <li>- the Environmental Master Plan</li> <li>- Natural Heritage and Environmental management Strategy</li> <li>- The Urban Forest Strategy</li> <li>- The Natural Heritage Restoration Plan</li> </ul>	Short Term
	<b>2.9.3</b>	Integrate the Eco Park principles in to the Parks and Recreation Master Plan during its next review.	Mid Term
	<b>2.9.4</b>	Integrate the Eco Park principles in to the Complete Streets Strategy.	Short Term

### Goal 3: Educate, Engage & Empower

Educate, engage, and empower the public, City staff, and external agencies to foster stewardship, coordination, and collaboration.



**Strategy 3.0:** Educate, activate, and engage the public and City staff through expanded education and outreach.

<b>3.1</b>	Develop and implement an Internal Eco Park Communication Plan.	Short Term
<b>3.1.1</b>	Draft an Eco Park Communication Plan that addresses internal communication and promotion.	Short Term
<b>3.1.2</b>	Develop a workshop series to educate and train internal staff and decision-makers about the Eco Park Program.	Short Term
<b>3.2</b>	Develop and implement an Eco Park Outreach and Engagement Plan.	Short Term
<b>3.2.1</b>	Establish Eco Park outreach responsibilities in BEAC.	Short Term
<b>3.2.2</b>	Develop an Outreach and Engagement Plan that addresses communication and engagement with residents, business, Conservation Authorities, and utilities.	Short Term
<b>3.2.3</b>	Create an educational workshop Eco Park principles for the Adopt a Park and Community Garden participants.	Mid Term
<b>3.2.3</b>	Create promotion and information signage for Brampton Eco Park.	Short Term
<b>3.2.3</b>	Partner with Parks to create an Eco Talk series to conduct at local libraries and schools.	Mid Term
<b>3.3</b>	Identify partnerships with potential external groups that can assist with implementation.	Short Term
<b>3.3.1</b>	Pursue favourable partnerships with NGO's, community groups, and other external groups that can assist with outreach and implementation.	Short Term
<b>3.4</b>	Develop and implement an Eco Park Stewardship Strategy.	Mid Term
<b>3.4.1</b>	Expand the Adopt a Park Program to include Eco Park Program.	Short Term



3.4.2	Create a promotion strategy for the Adopt a Park program.	Short Term
3.4.3	Establish the Adopt a Park Working Group.	Long Term
3.4.4	Incorporate a Train the Trainer program within the Adopt a Park Program, in which community members are trained to lead activities and teach members of the community about stewardship efforts.	Mid Term
3.4.5	Develop a public education program for children and adults partnering with the Parks Environmental Stewardship Program.	Long Term
3.4.6	Establish a stewardship mentorship program with local and/or school-aged mentorship programs such as Big Brother Big Sisters.	Mid Term
3.4.7	Create an annual Eco Park Celebration hosted by the Adopt a Park Working Group and/or BEAC.	Long Term
3.5	Implement worldwide competitions for Eco Park designs.	Long Term
3.5.1	Work with the Green City Working Group and BEAC to develop worldwide competitions for the designs of large/significant Eco Park centres (Siemens Property, Clareville etc.).	Long Term

## Goal 4: Monitor and Update

Monitor and report progress, and regularly refresh the strategies of the Eco Park Strategy.



**Strategy 4.0:** Set baselines and targets for the next 20 years to inform and drive the success of the Brampton Eco Park Strategy.

4.1	Maintain Brampton Eco Park for long-term success.	Ongoing
4.1.1	Work with the Adopt a Park Working Group, Green City Working Group, and Operations to develop a long-term and sustainable maintenance plan.	Mid Term
4.2	Develop an app that identifies all Eco Spaces in the City of Brampton.	Mid Term
4.3	Provide annual Eco Park updates to Council and the community.	Ongoing
4.4	Update the Brampton Eco Park Strategy every five years.	Ongoing
4.5	Establish an Eco Park database and map to document Brampton's growing Eco Park.	Short Term

## Next Steps

The next steps following the approval of the strategy by council are:

- Identify the current extent of Brampton Eco Park;
- Identify quick-win projects that achieve the Eco Park framework;
- Develop a communication and outreach plan; and
- Develop a map of Brampton Eco Park.

## 5.0 CONCLUSION

The Eco Park Strategy defines Brampton Eco Park and provides an action matrix to achieve its evolution. Brampton Eco Park is constructed of an interconnected network of Eco Spaces interwoven into the City's urban landscape. Eco Spaces must 1) enhance and maintain natural systems and processes as well as 2) integrate opportunities for meaningful social and environmental interactions. Their formation are guided by a set of seven Eco Park principles in which they must also strive to achieve. These principles are focused on strengthening the integration of natural and urban systems while effectively utilizing services natural systems provide to the community.

Population growth and resultant land-use changes within Brampton, have led to significant loss of natural infrastructure and the beneficial services they provide. Significant growth and intensification are predicted for Brampton's future, which will bring with it increasing pressure on Brampton's environmental, social, and infrastructure systems. Furthermore, changing climate and intensifying weather events threaten the long- and

short-term welfare of Brampton's infrastructure and citizens. The formation of Brampton Eco Park helps address these concerns. Brampton Eco Park will conserve and enhance natural systems within Brampton while effectively utilizing the benefits they provide to Brampton's social and infrastructure systems. Furthermore, Brampton Eco Park will be a showcase for the City, increase community cohesion and pride, attract visitors, talent, innovation, and business, and help the city and its people mitigate and adapt to a changing climate, while connecting people with nature responsibility,

## GLOSSARY:

**Active Recreation:** Outdoor recreational activities, such as organized sports, playground activities, and the use of motorized vehicles, that require extensive facilities or development or that have a considerable environmental impact on the recreational site.

**An Eco Space:** Green and sustainable areas within Brampton that strengthen the coexistence of humans and the environment by

- i. enhancing and maintaining natural systems and processes,
- ii. Integrating opportunities for meaningful social and environmental interactions and experiences, and
- iii. actively striving to incorporate the guiding principles of Eco Park.

**Community stewardship:** Safeguarding the well-being of fellow and future Bramptonians by taking ownership of your own actions, community, and environment through the responsible use and protection of the natural environment

**Brampton Eco Park:** A large and growing municipal park and nature reserve existing across the City and interwoven within the City landscape. It celebrates Brampton's natural and cultural heritage. It consists of a mosaic of Eco Spaces within Brampton, including but not limited the City's natural heritage system, parks, green spaces, green infrastructure streetscapes, green utility corridors, and greenyards that strive for the Eco Park principles. This is an ongoing process that will result, in 20 years, in a City filled with connected Eco Spaces.

**Ecological design:** design that minimize environmentally destructive impacts by integrating itself with living processes.

**Ecological integrity:** The ability of an ecosystem to support and maintain ecological processes and a diverse community of organisms.

**Ecological value:** the level of benefits that the space, water, minerals, biota, and all other factors that make up natural ecosystems provide to support native life forms.

**Eco Park Hub:** Concentrations of green areas within Brampton that have been identified as strategic areas for the expansion of Brampton Eco Park.

**Eco Park principles:** A set of nine principles that defines and guides the formation of Eco Spaces.

**Eco Park Program:** The City's Eco Park Strategy and its implementation to create Brampton Eco Park.

**Ecosystem:** All organisms living in a particular area, and the complex relationships between them and with their environment.

**Ecosystem services:** the direct and indirect benefits and contributions of ecosystems to human well-being

**Experiential park design:** is to create experiences within the park that allow visitors to connect with - and feel part of -nature and the natural systems it provides.

**High-functioning:** performing or operating at a high level



**Lens:** something that facilitates and influences perception, comprehension, or evaluation.

**Natural/ecological processes:** are interactions among plants, animals, and the environment which shape and create natural communities and ecosystems (e.g. decomposition, nitrogen fixation, the food chain, and natural succession).

**Natural/ecological functions:** The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socioeconomic interactions (e.g. bees pollinate, trees are carbon sinks, wetlands filter water, trees canopies provide habitat for birds)

**Natural Heritage System (NHS):** A system made up of natural heritage features and areas, with linkages intended to provide connectivity (at the regional or site level) and support natural processes, which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems.

**Passive Recreation:** Outdoor recreational activities, such as nature observation, hiking, jogging, or picnicking, that require a minimum of facilities or development and that have minimal environmental impact on the recreational site.

**Thoughtful design:** intentional and careful consideration of the long- and short-term impacts of features or design elements on the environment, their implications on visitor behaviour and habits, and the meaningful interactions they are trying to promote between people and nature.